

REMARKS

Claims 1-26 are currently pending. Claims 1-3, 6-16, and 19-26 have been withdrawn from further consideration. Claims 4, 17, and 18 are amended herein to clarify the claimed subject matter. Claims 4-5 and 17-18 are under consideration.

Support for amendment to the claims is found throughout the specification and in the original claims. Specifically, support for amendment to claims 4 and 17 is found, for example, in original claims 4 and 17 and at page 2, lines 10-21; at page 17, lines 6-23 and Figure 2, wherein support for the term sequencing is found; and, for example, at page 11, lines 9-24, wherein support for extending the 3' end of the primer to produce a nucleic acid strand complementary to the template nucleic acid is found; and, for example, at page 10, lines 14-26; at page 15, line 11 through to page 16, line 7; and at page 16, lines 25-28, wherein support for removing the nucleic acid strand complementary to the template nucleic acid to recover the single stranded template nucleic acid is found; and, for example, at page 16, line 29 through to page 17, line 29, wherein support for resequencing is found. Support for amendment to claim 18 is found in original claim 18. No issue of new matter is introduced by these amendments.

***Rejection Under 35 U.S.C. § 102***

Claims 4 and 17 are rejected under § 102(b) as allegedly anticipated by Nazarenko et al. [United States Patent Number (USPN) 6,090,552; issued 2000]. In view of the clarifying amendments to the claims, this rejection is respectfully traversed.

Claims 4 and 17 are amended herein to clarify that each of the claimed methods calls for two sequencing steps whereby the nucleic acid sequence of a first portion of a single-stranded template nucleic acid is determined by detecting each individual nucleotide after it is incorporated into the growing chain of the complementary strand generated by primer extension. In contrast, Nazarenko et al. is directed to oligonucleotides that are detectably labeled with molecular energy transfer (MET) labels and are used for nucleic acid amplification. The MET labeled oligonucleotides are well suited to methods for detecting the products of nucleic acid

amplification. Nazarenko et al. do not teach a sequencing step in any of the methods described therein and clearly, therefore, do not teach a resequencing step. In that the instant method calls for a sequencing step and a resequencing step, Nazarenko et al. fail to teach at least these two recited method steps. That being the case, the Nazarenko et al. patent does not anticipate the claimed method.

In view of the above arguments, the Examiner is respectfully requested to reconsider the validity of the rejection of claims 4 and 17 under 35 U.S.C. §102 and withdraw the rejection.

### ***Rejections under 35 USC § 103***

Claims 5 and 18 are rejected under 35 USC § 103(a) as allegedly unpatentable over Nazarenko et al. (USPN 6,090,552; issued 2000) in view of Chernov et al. (United States Patent Application No. 2004/0086866; filed 10/2002). In view of the clarifying amendments to the claims, this rejection is respectfully traversed for the reasons set forth herein below.

As detailed above, the claims have been amended to clarify that the methods of the present invention call for two sequencing steps whereby the nucleic acid sequence of a first portion of a single-stranded template nucleic acid is determined by detecting each individual nucleotide after it is incorporated into the growing chain of the complementary strand generated by primer extension. The Nazarenko et al. patent, in contrast, is directed to methods for detecting nucleic acid amplification products using oligonucleotides that are detectably labeled with MET labels. The Examiner acknowledges that Nazarenko et al. do not teach that hairpin probes are attached to a solid support. The application of Chernov et al. describes methods and compositions for creating double-stranded nucleic acid (e.g. dsDNA) microarrays. The Examiner relies on Chernov et al. for teaching the use of hairpin probes attached to a microarray.

Neither Nazarenko et al. or Chernov et al. teach or suggest a sequencing step whereby the nucleic acid sequence of a single-stranded template nucleic acid is determined by detecting each individual nucleotide after it is incorporated into the growing chain of the complementary strand generated by primer extension. It thus follows that these references also fail to present any guidance relating to a resequencing step. In that the claimed method calls for a sequencing step

and a resequencing step, these references fail to teach at least these two recited method steps. Moreover, there is no teaching or suggestion in these references when considered alone or in combination that would lead a skilled practitioner to the present invention. That being the case, the deficiencies of the Nazarenko et al. patent are not remedied by the teachings of Chernov et al. Accordingly, these references, alone and in combination, fail to render obvious the instantly claimed method.

In view of the above, the Examiner is respectfully requested to reconsider and withdraw the rejection of these claims under 35 U.S.C. §103.

**Provisional Rejection Under the Judicially Created Doctrine of Obviousness-Type Double Patenting**

The Examiner has provisionally rejected claims 4-5 and 17-18 under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claims 1-2, 10-11, and 19-26 of co-pending application 10/537,186. A Terminal Disclaimer is attached hereto, the filing of which is believed to overcome the above rejection of pending claims 4-5 and 17-18 of the present invention under the judicially created doctrine of obviousness-type double patenting.

***Fees***

No fees are believed to be necessitated by this amendment. However, should this be an error, authorization is hereby given to charge Deposit Account No. 11-1153 for any underpayment or to credit any overpayment.

***Conclusion***

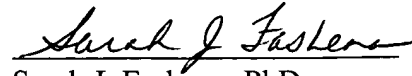
It is submitted, therefore, that the claims are in condition for allowance. No new matter has been introduced. Allowance of all claims at an early date is solicited. In the event that there are any questions concerning this amendment, or application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of this application may be

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expedited.

Respectfully submitted,



Sarah J. Fashena, PhD.

Agent for Applicant(s)

Registration No. 57,600

KLAUBER & JACKSON  
411 Hackensack Avenue  
Hackensack, New Jersey 07601  
(201) 487-5800

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Enclosures: Terminal Disclaimer  
Information Disclosure Statement